

WHAT IS CLAIMED AS NEW AND DESIRED TO BE SECURED BY LETTERS
PATENT OF THE UNITED STATES IS:

1. A bacteria strain characterized by exhibiting:
 - (a) a 7 α -dehydroxylase activity of less than 50%, and (b) a
 - 5 bile acid deconjugation activity of less than 50%, and
 - descendants, mutants and derivatives thereof preserving
 - activities (a) and (b).
2. The strain of claim 1, which is a gram-positive bacteria strain.
- 10 3. The strain of Claim 1, belonging to a species selected from *Streptococcus thermophilus*, *Streptococcus faecium*, and *Lactobacillus bulgaricus*.
4. The strain of Claim 3, wherein the bacteria strain is *Streptococcus thermophilus* YS 52 deposited with the
- 15 CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1670.
5. The strain of Claim 3, wherein the bacteria strain is *Streptococcus thermophilus* YS 46, deposited with the
- CNCM, Collection Nationale de Cultures de Microorganismes,
- 20 Institut Pasteur, under the accession number I-1668.

6. The strain of Claim 3, wherein the bacteria strain is *Streptococcus thermophilus* YS 48, deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1669.

5 7. The strain of Claim 3, wherein the bacteria strain is *Streptococcus faecium* SF 3, deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1671.

10 8. The strain of Claim 3, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 1 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1664.

15 9. The strain of Claim 3, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 3 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1665.

20 10. The strain of Claim 3, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 7 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1666.

11. The strain of Claim 3, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 77 deposited with the

CNCM, Collection Nationale de Cultures de Microorganismes,
Institut Pasteur, under the accession number I-1667.

12. A pharmaceutical composition for preventing
and/or treating diseases associated with or caused by an
5 altered metabolism of bile acids, comprising an effective
amount capable of producing a normalizing effect on such an
altered metabolism in a patient suffering therefrom, of
(1) at least one bacteria strain provided with: (a) a 7 α -
dehydroxylase activity of less than 50%, and (b) a bile
10 acid deconjugation activity of less than 50%, and
descendants, mutants and derivatives thereof preserving
activities (a) and (b), and
(2) a pharmaceutically acceptable carrier.

13. The pharmaceutical composition of claim 12,
15 wherein said at least one bacteria strain is a gram-
positive bacteria strain.

14. The composition of Claim 12, wherein said at
least one bacteria strain belongs to a species selected
from the group consisting of *Streptococcus thermophilus*,
20 *Streptococcus faecium*, and *Lactobacillus bulgaricus*.

15. The composition of Claim 14, wherein the bacteria
strain is *Streptococcus thermophilus* YS 52 deposited with

the CNCM, Collection Nationale de Cultures de
Microorganismes, Institut Pasteur, under the accession
number I-1670.

16. The composition of Claim 14, wherein the bacteria
5 strain is *Streptococcus thermophilus* YS 46 deposited with
the CNCM, Collection Nationale de Cultures de
Microorganismes, Institut Pasteur, under the accession
number I-1668.

17. The composition of Claim 14, wherein the bacteria
10 strain is *Streptococcus thermophilus* YS 48 deposited with
the CNCM, Collection Nationale de Cultures de
Microorganismes, Institut Pasteur, under the accession
number I-1669.

18. The composition of Claim 14, wherein the bacteria
15 strain is *Streptococcus faecium* SF 3 deposited with the
CNCM, Collection Nationale de Cultures de Microorganismes,
Institut Pasteur, under the accession number I-1671.

19. The composition of Claim 14, wherein the bacteria
strain is *Lactobacillus bulgaricus* LB 1 deposited with the
20 CNCM, Collection Nationale de Cultures de Microorganismes,
Institut Pasteur, under the accession number I-1664.

20. The composition of Claim 14, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 3 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1665.

5 21. The composition of Claim 14, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 7 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1666.

10 22. The composition of Claim 14, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 77 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1667.

23. The composition of Claim 12, comprising 10^3 to 10^{13} cells of the bacteria strain per gram of composition.

15 24. The composition of Claim 12, further comprising lactulose.

25. The composition of Claim 12, further comprising bile acid-based preparations, such as ursodeoxycholic acid and tauroursodeoxycholic acid.

20 26. A method for preventing and treating diseases caused by or associated with an altered metabolism of bile

acids, said method comprising administering at least one bacteria strain characterized by exhibiting:

- (a) a 7 α -dehydroxylase activity of less than 50%, and
- (b) a bile acid deconjugation activity of less than 50%, and descendants, or a mutant or derivative thereof preserving activities (a) and (b).

27. A method of claim 26, wherein the at least one bacteria strain is a gram-positive bacteria strain.

28. The method of Claim 26, wherein the bacteria strain belongs to a species selected from the group consisting of *Streptococcus thermophilus*, *Streptococcus faecium*, and *Lactobacillus bulgaricus*.

29. The method of Claim 28, wherein the bacteria strain is *Streptococcus thermophilus* YS 52 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1670.

30. The method of Claim 28, wherein the bacteria strain is *Streptococcus thermophilus* YS 46 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1668.

31. The method of Claim 28, wherein the bacteria strain is *Streptococcus thermophilus* YS 48 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession
5 number I-1669.

32. The method of Claim 28, wherein the bacteria strain is *Streptococcus faecium* SF 3 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1671.

10 33. The method of Claim 28, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 1 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1664.

15 34. The method of Claim 28, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 3 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1665.

20 35. The method of Claim 28, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 7 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1666.

36. The method of Claim 28, wherein the bacteria strain is *Lactobacillus bulgaricus* LB 77 deposited with the CNCM, Collection Nationale de Cultures de Microorganismes, Institut Pasteur, under the accession number I-1667.